DOCUMENT RESUME

ED 464 765 PS 030 404

AUTHOR	Saluja, Gitanjali; Early, Diane M.; Clifford, Richard M.
TITLE	Demographic Characteristics of Early Childhood Teachers and Structural Elements of Early Care and Education in the United States.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE	2002-00-00
NOTE	20p.; In: Early Childhood Research & Practice: An Internet Journal on the Development, Care, and Education of Young Children, Spring 2002; see PS 030 400. Published biannually.
CONTRACT	R307A60004
AVAILABLE FROM	For full text: http://ecrp.uiuc.edu/v4n1/index.html.
PUB TYPE	Journal Articles (080) -- Reports - Research (143)
JOURNAL CIT	Early Childhood Research & Practice; v4 n1 Spr 2002
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Child Caregivers; Classroom Environment; *Day Care; Day Care Centers; *Demography; Early Childhood Education; *Preschool Education; *Preschool Teachers; Teacher Characteristics
IDENTIFIERS	Program Characteristics

ABSTRACT

This paper summarizes demographic information on early childhood programs and teachers of 3- and 4-year-olds. Questionnaires were sent to a random sample of early childhood programs across the United States. Data were collected on teacher characteristics and structural features of early childhood programs (enrollment, class size, hours of operation, and ratio of teachers to students). Findings indicated that there are approximately 284,277 teachers of 3- and 4-year-olds in the United States. The vast majority of these teachers are women, and 78 percent are white. Approximately 50 percent of these teachers have earned a college degree, although educational attainment varies among program types. For-profit centers currently outnumber other types of centers, although the number of early childhood programs in public schools is increasing rapidly. The findings will be of interest to parents, and it is therefore important for them to have access to information about the characteristics of early childhood programs and teachers. Additionally, policy-makers need to understand the distinctions that exist between different types of early childhood settings as they adopt regulations and make funding decisions that affect parental choice of programs. (Contains 18 references.) (Author/HTH)

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ED 464 765

ECRP
Early Childhood Research & Practice:

Spring 2002
Volume 4 Number 1

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Demographic Characteristics of Early Childhood Teachers and Structural Elements of Early Care and Education in the United States

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Abstract

This paper summarizes demographic information on early childhood programs and teachers of 3- and 4-year-olds. Questionnaires were sent to a random sample of early childhood programs across the United States. Data were collected on teacher characteristics and structural features of early childhood programs (enrollment, class size, hours of operation, and ratio of teachers to students). Results indicate that there are approximately 284,277 teachers of 3- and 4-year-olds in the United States. The vast majority of these teachers are women, and 78% are White. Approximately 50% of these teachers have earned a college degree, although educational attainment varies among program types. For-profit centers currently outnumber other types of centers, although the number of early childhood programs in public schools is increasing rapidly. The findings will be of interest to parents because they must choose among different program types when selecting a setting for their children, and it is therefore important for them to have access to information about the characteristics of early childhood programs and teachers. Additionally, policy makers need to understand the distinctions that exist between different types of early childhood settings as they adopt regulations and make funding decisions that affect parental choice of programs.

PS 030 404

Introduction

Over the past three decades, the number of children in early childhood programs before kindergarten has been increasing. Currently, more than 65% of mothers with children under the age of 6 are in the labor force (U.S. Department of Labor, 2001). According to data from the National Center for Education Statistics, in 1995, 67% of 3-year-olds and

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77% of 4-year-olds spent some amount of time each week in nonparental care (Hofferth, Shauman, West, & Henke, 1998). These numbers are bound to increase, given the increase in numbers of mothers in the workforce and given the emphasis on sending children to kindergarten "ready for school."

The Current Study

This paper aims to fill the gap in current information on the early childhood workforce and structural features of center-based early childhood programs by presenting the results of a nationally representative survey of teachers of 3- and 4-year-olds. This study was conducted by the National Center for Early Development and Learning to provide demographic information on early childhood programs and teachers and to assess teachers' practices, beliefs, and perceived barriers to endorsed practice. The current paper summarizes demographic information and compares it with estimates from other sources, including the 1990 study of child care settings conducted by the Mathematica Policy Group Inc. (Kisker, Hofferth, Phillips, & Farquhar, 1991). Teachers' practices, beliefs, and perceived barriers to practice are addressed in a separate paper (Early, Saluja, & Clifford, 2001). In this paper, we will present data on teacher characteristics as well as structural features of early childhood programs across the United States (enrollment, class size, hours of operation, and ratio of teachers to students). Because previous research has indicated links between early childhood program sponsorship (program type) and many features of early childhood programs, we focus on comparing centers across sponsorship categories (program types). Parents must choose among different program types when selecting a setting for their children. Policy makers need to understand the distinctions that exist between different types of early childhood settings as they adopt regulations and make funding decisions that affect parental choice of programs. Thus a better understanding of how program type is linked to structural features of quality is important.

Types of Programs Serving Young Children

Young children are being served in a variety of settings, including center-based programs, family child care, and care provided by relatives other than parents. The current study focuses on center-based care. These programs vary with regard to for-profit versus nonprofit status. Within profit status, they further vary with regard to organizational affiliation. For example, within the for-profit sector, settings can be independently operated or operated by a national or local chain. Within the nonprofit sector, settings can be affiliated with Head Start, a public school, a religious organization, or another type of nonprofit (e.g., YMCA). Both the setting's profit status and its organizational affiliation have implications for many aspects of the program's operations. Head Start, for instance, has specific guidelines governing class size, teacher education, and curriculum (U.S. Department of Health and Human Services, 1996). Likewise, according to several states' guidelines (e.g., Arkansas, Missouri, and North Carolina), religiously affiliated settings may operate within guidelines put forth by the sponsoring church or synagogue and are often exempt from state child care guidelines/regulations (National Resource Center for Health and Safety in Child Care, 2000).

A study by the Mathematica Policy Research group (Kisker, Hofferth, Phillips, & Farquhar, 1991) estimated that at the beginning of 1990, there were approximately 80,000

center-based programs in the United States. The authors differentiated program types by "sponsorship," defined as "a program's belonging to or having an affiliation with another organization from which the program receives direction and/or funding" (p. 33). The authors found that two-thirds of centers serving children 3 or older were nonprofit. Of those, about 23% were sponsored by a religious organization (such as a church or synagogue), 12% were sponsored by a public school, and 14% were sponsored by Head Start. An additional 51% of nonprofit centers were either independent or sponsored by another organization. Of the 36% for-profit centers, 17% were national or local chains and 83% were independent.

Structural Features of Quality

Despite the increasing number of children in care, we have little national information about the characteristics of early childhood teachers and the structural features of early childhood settings. We know what high-quality programs look like, and we have some evidence that the quality of care varies among different types of settings (Kisker, Hofferth, Phillips, & Farquhar, 1991); however, we lack a current profile of early childhood settings and the early childhood workforce. The current study aims to fill this gap by providing a current national profile of early childhood programs and teachers, including information on various aspects of quality.

Data from the Cost, Quality, and Outcomes study (Cost, Quality, and Outcomes Study Team, 1995) suggest that several structural characteristics of care settings are associated with quality in early childhood programs. These characteristics include the level of teacher education and specialized training, teacher wages, child-to-teacher ratios, teacher turnover, and administrator's prior experience.

Teacher Education

Generally speaking, higher-quality programs employ teachers who have completed more years of education than do lower-quality programs. Further, teachers in high-quality settings tend to have more specialized training in early childhood education and child development, and they are more informed about developmentally appropriate practices and teaching strategies for use with young children. Due to the short supply of teachers trained in early childhood education and the tight budgets of programs, it can be difficult to hire and keep teachers who are highly trained for their jobs (Whitebook, Howes, & Phillips, 1989).

According to data from the 1990 Profile of Child Care Settings (Kisker, Hofferth, Phillips, & Farquhar, 1991), 47% of teachers had a four-year college degree, 13% had an associate's degree, 26% had some college, 13% had graduated from high school, and 1% had less than a high school degree. Although these numbers may appear high in comparison to the general population, they are dramatically lower than the population of kindergarten teachers (Early, Pianta, & Cox, 1999). Teachers in nonprofit settings tend to be more highly educated than teachers in for-profit settings. Approximately 33% of teachers in for-profit settings had a college degree, whereas 50% of teachers in nonprofit settings had a college degree. Further, teachers in public-school-based settings were more educated than teachers in other settings. Eighty-eight percent had a college or graduate degree,

compared with 50% of teachers in religious settings and 45% of teachers in Head Start settings.

Wages and Turnover

Teacher education is highly correlated with teacher wages and turnover—two other important features of quality. As in other professions, teachers with more years of education tend to be paid more than teachers with fewer years of education. Furthermore, teachers who are paid more tend to stay at their jobs longer than those who are paid less (Whitebook, Howes, & Phillips, 1989).

Data from the Cost, Quality, and Outcomes study indicate that higher-quality settings have half as much turnover as lower-quality settings (Cost, Quality, and Outcomes Study Team, 1995). Research has demonstrated that children can be affected by the consistency of caregivers. Children with multiple caregivers in child care can form insecure attachments with their mothers and can have difficulty adjusting to school (Howes & Stewart, 1987, as cited in Kisker, Hofferth, Phillips, & Farquhar, 1991). Although teacher turnover seems to be a significant challenge in all types of programs, in 1990 for-profit centers had far higher teacher turnover than did nonprofit centers. Head Start and public-school-based programs were less likely to experience teacher turnover than any other program type (Kisker, Hofferth, Phillips, & Farquhar, 1991).

Child-to-Staff Ratio

Child-to-staff ratios are another important feature of quality. Generally speaking, higher-quality early childhood programs have more staff per child than lower-quality settings. Children in high-quality settings are likely to receive more individualized attention than children in centers where there are fewer teachers and more students. The National Association for the Education of Young Children (Bredekamp & Copple, 1997) recommends a ratio of 8 children per staff member for 3-year-olds and 10 children per staff member for 4-year-olds. Data from the 1990 Profile of Child Care Settings indicate that in 1990 the average was 9.9 children per staff member serving 3- to 5-year-olds (Kisker, Hofferth, Phillips, & Farquhar, 1991).

Other Important Features of Early Childhood Education

In addition to the indicators of quality discussed above, there are other important factors to examine when considering structural features of early childhood programs. These include the cultural representation of teachers of young children and the hours that these programs operate. As our population grows more diverse, it becomes increasingly important to have a diverse group of teachers. Ideally, the pool of teachers should reflect the cultural breakdown of the children. Horm-Wingerd and Hyson (2000) argue that a more diverse teaching pool encourages a more culturally sensitive environment for children. The field of early childhood education needs knowledgeable, trained, competent, and sensitive multilingual/multicultural early childhood educators. Further, early childhood educators who speak more than one language are an invaluable resource in the early childhood setting (NAEYC, 1995).

Little information is available with regard to hours of operation for early childhood programs, but this program feature is clearly of importance to parents. If programs aimed at providing enriching early educational experiences (e.g., Head Start, school-based public pre-kindergarten) only operate for a half-day or school day, parents who are employed full-time must find other care options for their children. The inflexible work schedules of working-class and low-income parents may prevent some children from attending programs that are designed specifically for them. This problem may be even more challenging for the 7.3% of women and 9.3% of men with children under 6 years of age who work second or third shifts (U.S. Department of Labor, 1997). Center-based care may be entirely unavailable for these families.

Method

Sample Selection and Procedures

We mailed questionnaires to a stratified random sample of 4,979 directors of early childhood centers nationwide in the fall of 1997. No national lists or registries of early childhood teachers exist, in part because of the high turnover in this field and the lack of a national- or state-level infrastructure. Therefore, we selected early childhood programs from a larger list of 85,715 programs purchased from a commercial firm. We believe that this list was the most comprehensive catalog of early childhood programs available at the time because the firm obtained child care licensing/accreditation records in every state and large urban area each time a new list became available. Further, they verified the existence/addresses of centers through mailings and follow-up phone calls. Each year, the firm adds from 4,000 to 5,000 programs to the list, and they drop approximately 3,000.

The sample was stratified on eight levels of program type (national or local chain, independent for-profit, religious affiliate, Head Start, public school, independent nonprofit, other public agency, and unknown) and four levels of program size (less than 40, 40-99, 100+, and unknown), creating 32 sampling cells. We over-sampled for chains and other public agencies at each level of center size because those were relatively small groups in the frame and we wanted to ensure a high enough response to draw meaningful conclusions. The sample included all types of part-day and full-day center-based care, including Head Start, public school based, church or synagogue based, and national and local chains. Family day care homes were excluded. (For a complete description of the sampling and weighting strategy, please contact the first author.)

Directors were asked to fill out the first page of the questionnaire, which asked general questions about the center (e.g., number of children served, program type). After completing this section, directors were asked to give the survey to the teacher of 3- or 4-year-olds who she/he felt was best qualified to answer the remainder of the questions. The survey included a definition of *teacher:* "We consider a teacher to be the person with primary responsibility for a group of children. There may be more than one teacher in a group (co-teachers), but teacher to us does not include assistant teachers, aides, floaters, or others who work under the direction of the primary teacher." Directors were specifically asked not to complete the teacher portion of the survey themselves, unless they were the only teachers of 3- and 4-year-olds in the center. Although this teacher-selection strategy was not the preferred strategy, pre-testing indicated that most directors, regardless of the

instructions given, used this strategy. Further, given that most programs follow local, state, or federal licensing requirements, we believe that there is little within-center variance among teachers with regard to qualifications. Teachers, rather than directors, were asked to return the questionnaires. In order to increase the likelihood that they did so, we stapled the envelope to the questionnaire.

The teacher section of the survey included questions about teachers' views of their roles as early childhood educators, their training experiences and barriers to additional training, the discipline strategies they employ, their classroom practices and beliefs about best practice, barriers to engaging in the practices they endorse, and demographic characteristics. Survey items were written primarily by the authors and were heavily pre-tested both through face-to-face interviews with local early childhood teachers and through two national samples who received and returned the survey by mail and later provided feedback by phone.

Response Rate

Our final sample included 1,902 teachers of 3- and 4-year-olds. Of the 4,979 mailed surveys, 4,782 went to valid addresses. A total of 2,031 were returned, for a return rate of 43%. Of the 2,031 that were returned, 1,971 were completed. The remaining 60 indicated that they had either closed or did not serve 3- or 4-year-olds. Finally, several were omitted because they were completed either by the center director who did not teach 3- or 4-year-olds ($n = 51$) or a teacher of children younger or older than 3 or 4 years of age ($n = 18$). This sorting left us with 40% of the surveys that went to valid addresses available for analyses. The current sample does contain 132 cases (7% after weighting) where a director completed the survey. All of these directors were also lead teachers of 3- or 4-year-olds, with primary responsibility for a group.

Data Analysis

Our primary goals in this study were to learn about what early childhood programs across the United States look like and to compare programs across the different program types. To this end, we will present national estimates of means and percentages, cross-tabulated by program types. Due to the large sample size, very small between-group differences are statistically significant. For this reason, we do not present tests of significance.

In order to obtain meaningful national estimates, two sets of weights were created: one to estimate center-level values and one to estimate teacher-level values. The center-level weights are based on the original sampling frame. The teacher-level weights are the product of multiplying the center-level weight by the number of teachers of 3- and 4-year-olds at the center. All analyses were conducted using SUDAAN, a software package specifically designed for complex sample surveys.

Results

Early Childhood Program Characteristics

Program Type. Directors were asked, "Which of the following best describes your center/school?" and were provided with a list of nine options. For data reduction purposes, we grouped these nine options into five classifications of program type: (1) public school (excluding Head Start), (2) Head Start, (3) independent nonprofit and other public agencies (e.g., operated by public college/university or public hospital), (4) affiliated with a church or synagogue, and (5) for-profit (includes independent for-profits, local for-profit chains, and national for-profit chains). Table 1 indicates the sample sizes and population estimates for each of these categories. Using these data, we estimate that 8% of centers are Head Start programs, 16% are in public schools, 25% are independent nonprofit or other public agency, 22% are affiliated with a religious organization, and 29% are for-profit.

Table 1
Program Type

	Sample Size	Population Estimate	SE	% of Population
Head Start	227	6,462	349	8
Public school (not Head Start)	313	12,017	300	16
Other public agency or independent nonprofit	585	19,179	803	25
Affiliated with a church or synagogue	317	17,194	558	22
For-profit	420	22,630	774	29
Missing	40			
TOTAL	1,902	**77,482**		

Hours of Operation. Center directors were asked to indicate the opening and closing times of their centers. We categorized their responses into four different groups: (1) half day (5 or fewer hours), (2) school-length day (5.1-8 hours), (3) full day (more than 8 hours), and (4) nontraditional hours (open any hours between 9:00 p.m. and 5:00 a.m.). These categories are mutually exclusive, and programs were categorized as "nontraditional hours" if they were open during the night, regardless of the number of hours they operated. Results indicate that the majority (58%) of early childhood programs are open for the full day, 30% are open for the school day, 12% are open half days, and 1% are open during nontraditional hours. This pattern held true across program types, with some variation. For example, as one would expect, public schools have the largest percentage of programs open during school days (see Table 2).

Table 2
Percentages (and Standard Errors) of Centers by Length of Day and by Program Type

	Overall	Public School	Head Start	Other Public Agency or Independent Nonprofit	Church/ Synagogue	For-profit
Half day (5 or fewer hours)	11.6 (0.8)	12.4 (1.9)	17.3 (2.6)	13.5 (1.9)	17.1 (2.2)	3.7 (1.1)
School day (5.1-8 hours)	30.0 (1.1)	73.0 (2.6)	46.7 (3.7)	19.5 (2.0)	35.1 (2.8)	7.8 (1.6)
Full day (more than 8 hours)	57.8 (1.1)	14.1 (2.1)	35.7 (3.7)	66.2 (2.4)	47.6 (2.8)	87.5 (2.0)
Nontraditional hours	0.7 (0.3)	0.5 (0.4)	0.4 (0.4)	0.8 (0.5)	0.3 (0.3)	1.0 (0.7)

Teacher Characteristics

Using these data, we estimated that there are 284,277 teachers of 3- and 4-year-olds in the United States.

Age and Gender. Teachers were asked to indicate their age and gender. We estimate that the average age of teachers of 3- and 4-year-olds is 39 years (SE = .34). For-profit centers have the youngest average age (M = 35, SE = .72), whereas public school teachers have the oldest average age (M = 42, SE = .67). Ninety-nine percent of teachers of 3- and 4-year-olds are female. Gender did not vary across program type.

Race/Ethnicity. Teachers were asked to indicate their race/ethnicity by checking all races/ethnicities that applied to them from a list of six options. By our estimates, the majority of teachers of 3- and 4-year-olds are White (78%), followed by Black or African American (10%) and Hispanic or Latino (6%). Only 1% of teachers are Asian or Pacific Islander, and less than 1% (.85%) are American Indian or Native Alaskan. A remaining 4% classified themselves as mixed/other. Table 3 displays the teacher racial/ethnic breakdown by program type. As is evident in this table, there is a smaller percentage of White teachers in Head Start programs than other program types. Additionally, public schools have a higher percentage of Hispanic or Latino teachers than any other program type.

Table 3
Teacher Race and Education Percentages (and Standard Errors) by Program Type*

	Overall	Public School	Head Start	Other Public Agency or Independent Nonprofit	Church/ Synagogue	For-profit
			Teacher Race			
American Indian or Native Alaskan	0.9% (.4)	0.6% (.5)	5.1% (3.2)	0.2% (.2)	0.6% (.5)	0% (0)
Asian or Pacific Islander	1.1% (.4)	0% (0)	2.7% (2.3)	0.5% (.2)	1.7% (.8)	0.9% (.4)
Black or African American	10.2% (1.2)	8.4% (2.3)	35.0% (6.5)	9.0% (1.5)	5.5% (1.2)	5.6% (1.5)
Hispanic or Latino	5.7% (1.0)	10.5% (5.0)	6.4% (2.5)	3.6% (.9)	2.9% (1.0)	7.5% (2.1)
White	78.4% (1.6)	78.2% (5.0)	47.5% (6.2)	80.5% (2.4)	85.7% (2.1)	83.3% (2.6)
Mixed/Other	3.8% (.6)	2.3% (1.1)	3.4% (1.4)	6.2% (1.8)	3.6% (1.1)	2.7% (1.0)
			Teacher Education			
High School graduation or below	8.6% (1.0)	.1% (.1)	6.0% (2.3)	7.4% (1.8)	7.7% (1.7)	14.5% (2.4)
Vocational training or some college	26.8% (1.6)	4.0% (1.3)	33.2% (6.2)	20.4% (2.4)	28.6% (3.5)	36.0% (3.3)
Associates	14.7% (1.7)	8.9% (2.7)	17.7% (2.3)	17.7% (2.3)	17.9% (2.8)	10.8% (2.0)
Bachelor's or higher	49.9% (1.8)	87.0% (2.9)	40.4% (6.1)	54.5% (3.0)	45.8% (3.6)	38.6% (3.5)

*All values are weighted to represent the United States as a whole (overall column) or the specified program type. Values in parentheses represent standard errors.

Education. Teachers were asked, "How far did you go in school?" and were given eight options, from "8th grade or less" to "advanced degree (master's, doctorate)." As seen in Table 3, we grouped their responses into four categories. Ninety-one percent of teachers of 3- and 4-year-olds have some education beyond high school. Of this number, 27% have some college and an additional 50% have at least a bachelor's degree. Only 0.1% stated that they did not have a high school diploma or GED equivalency. Teacher education varies by program type. Teachers in public schools had more education than teachers in

other program types. Eighty-seven percent of teachers who work in the public schools have at least a bachelor's degree, whereas less than 50% of teachers in religious settings, for-profit settings, and Head Start programs have a bachelor's (see Table 3).

We also asked teachers to report what types of training they had received in early childhood education or child development. We asked teachers to check all that applied from the following list: (1) no specialized training, (2) workshops, (3) some college courses but no degree, (4) CDA (Child Development Associate), (5) AA (associate's degree), (6) working on bachelor's, (7) BA/BS (bachelor's), and (8) advanced degree. Less than 1% of early childhood teachers reported no training in early childhood. Many (62%) have at least attended workshops on early childhood topics. Thirty-one percent have taken some college-level courses in early childhood but have not earned a college degree in early childhood, 19% have earned a CDA, 12% have an associate's degree, 31% have earned a bachelor's degree, and 13% have an advanced degree in early childhood.

Tenure. We asked teachers to indicate how long they had been employed at their current jobs. Using these data, we estimate that on average, teachers have been at their jobs 82 months (6.8 years). Teachers who teach in the public schools or at a church or synagogue have been at their jobs the longest (M = 93 months, or 7.8 years). Head Start teachers have been at their jobs for an average of 83 months (6.9 years), and teachers at public agencies or independent nonprofit agencies have been at their jobs 85 months (7.1 years). Teachers at for-profit centers have spent the least time at their current jobs, averaging 67 months (5.6 years).

Hours Worked per Week. Teachers were asked, "How many hours do you usually work at this center/school each week?" Our data indicate that teachers report working an average of 35 hours per week. The majority (75.8%) of teachers reported working between 20-40 hours per week, although 16% work fewer than 20 hours per week, and 9% work more than 40 hours per week. It is unclear, however, if this number reflects the number of hours for which they are paid for their time.

The above pattern held true, to varying degrees, across program types. More teachers in public schools reported working more than 40 hours per week (16.3%) than in any other program type. Some teachers in other program types also reported that they worked more than 40 hours a week, but those percentages were not as high. Three percent of teachers in church/synagogue programs reported working more than 40 hours per week, whereas 12% of teachers in nonprofit centers reported working more than 40 hours per week. Teachers at church/synagogue settings most often reported working fewer than 20 hours per week (24%). Nine percent of teachers at for-profit centers reported working fewer than 20 hours per week, whereas only 3% of Head Start teachers reported working less than half time.

Classroom Characteristics

Child Race/Ethnicity. Teachers were given racial/ethnic categories and asked to indicate the number of children in their class in each category. Although classes vary with regard to racial diversity of children, our data suggest that the average early childhood classroom is 66% White, 15% African American, 9% Hispanic, 5% mixed race, 4% Asian American, 1% Native American, and 1% other. Public school and Head Start programs are more ethnically diverse than other programs. Table 4 displays the racial breakdown for all

program types.

Table 4
Mean Percentages (and Standard Errors) of Students in Each Racial Group by Program Type*

	Overall	Public School	Head Start	Other Public Agency or Independent Nonprofit	Church/ Synagogue	For-profit
American Indian or Native Alaskan	1.2% (.2)	1.6% (.6)	2.2% (.6)	0.7% (.2)	0.9% (.4)	1.1% (.3)
Black or African American	15.1% (.8)	19.9% (2.0)	36.5% (4.1)	16.0% (1.7)	6.8% (.9)	11.1% (1.1)
Asian or Pacific Islander	3.5% (.3)	3.3% (.7)	.8% (.3)	4.3% (.7)	4.5% (.7)	3.0% (.5)
White	65.8% (1.1)	51.8% (3.3)	40.1% (4.7)	64.8% (2.1)	77.8% (1.8)	72.5% (.7)
Hispanic or Latino	8.7% (.7)	19.0% (3.2)	15.8% (3.9)	6.6% (.8)	5.5% (.8)	6.3% (.9)
Mixed Race/ Ethnicity	5.0% (.7)	3.7% (.7)	4.8% (.9)	6.3% (.6)	4.0% (.5)	5.3% (.7)
Other	0.8% (.1)	0.6% (.2)	0.1% (.1)	1.4% (.4)	0.8% (.2)	0.7% (.2)

*All values are weighted to represent the United States as a whole (overall column) or the specified program type. Values in parentheses represent standard errors.

The numbers in Table 4 represent what the average classroom looks like. In reality, because there is wide variation with regard to racial diversity, very few classrooms will resemble the "average" classroom. For this reason, we calculated the percentage of classrooms in which one racial/ethnic group is prevalent. If a classroom had 75% or more of one racial/ethnic group, we considered that group prevalent in that classroom.

Our results indicate that most classrooms (61.3%) in the United States have a racial/ethnic group that predominates and that group is White about half the time (see Table 5). However, a large minority of classrooms (38.7%) have no racial/ethnic group that predominates. Head Start programs are more likely than any other program to be predominantly African American. Church/synagogue-based programs are especially likely to be predominantly White (67%).

Table 5
Percentages (and Standard Errors) of Classrooms with 75% or More of One Racial Group, by Program Type*

	Overall	Public School	Head Start	Other Public Agency or Independent Nonprofit	Church/ Synagogue	For-profit
African American	6.4% (.8)	9.4% (2.0)	22.2% (4.9)	5.9% (1.4)	3.0% (.8)	1.9% (.7)
Native American	.3% (.1)	5% (.5)	.7% (.4)	.1% (.1)	.4 (.3)	.2% (.2)
Asian	.3% (.1)	.5% (.5)	0% (0)	.7% (.5)	.4 (.3)	.1% (.1)
Hispanic	2.8% (.7)	8.6% (2.5)	8.6% (4.8)	1.1% (.5)	1.1% (.7)	1.1% (.7)
White	51.4% (1.8)	36.7% (4.5)	21.7% (5.4)	53.1% (3.1)	67.2% (3.4)	55.2% (3.5)
None over 75%	38.7% (1.7)	44.4% (4.8)	46.7% (6.2)	39.0% (3.0)	27.9% (3.3)	41.6% (3.5)

*All values are weighted to represent the United States as a whole (overall column) or the specified program type. Values in parentheses represent standard errors.

Teachers. Who are the teachers who are teaching children of diverse backgrounds? As stated previously, most early childhood teachers are White; however, many classrooms that contain a large number of non-White children have teachers from the same racial/ethnic groups that predominate in the classroom. To explore this issue, we looked at classrooms that contain 75% or more children of one race, and then looked at the teachers in these classrooms. As seen on the diagonal centerline of Table 6, classrooms in which 75% or more of the children are from one racial/ethnic group have a larger percentage of teachers of that same race than teachers of another race.

Table 6
Percentages (and Standard Errors) of Teachers in Each Racial/Ethnic Category by Predominant Race/Ethnicity of Children in the Classrooms

	Classroom Race					
Teacher Race	75% African American	75% Asian	75% Hispanic	75% Native American	75% White	No Race 75% or Over
African American	70.5% (5.1)	0% (0)	23.8% (16.0)	0% (0)	1.4% (.5)	11.1% (1.9)
Asian	.8% (.5)	6.6% (6.7)	0% (0)	0% (0)	.3% (.1)	2.1% (.9)
Hispanic	0% (0)	6.8% (6.9)	46.4% (12.4)	0% (0)	.7% (.3)	10.4% (2.2)
Native American	.3% (.3)	0% (0)	0% (0)	31.9% (18.0)	0% (0)	1.9% (1.0)
White	22.3% (4.6)	70.2% (16.7)	25.8% (8.4)	41.5% (19.2)	95.3% (.9)	69.9% (2.9)
Mixed Other	6.2% (2.6)	16.2% (14.8)	4.0% (2.7)	26.6% (14.7)	2.3% (.6)	4.7% (1.2)

*All values are weighted to represent the United States as a whole (overall column) or the specified program type. Values in parentheses represent standard errors.

Class Size and Ratios. Teachers were asked to indicate the number of children and paid staff members in their group at one time. Based on these data, we computed child-to-staff ratios. As seen in Table 7, the average classroom has 16.4 children, with 2.0 paid staff. The average child-to-staff ratio is 9 to 1. Programs in religious settings have the smallest class size, whereas Head Start programs have the largest class size. Public school programs have the most favorable child-to-staff ratios, whereas for-profit programs have the least favorable ratios (see Table 7).

Table 7
Mean Group Size and Staff: Child Ratios (and Standard Errors) by Program Type*

	Overall	Public School	Head Start	Other Public Agency or Independent Nonprofit	Church/ Synagogue	For-profit
Children in group	16.4 (.2)	16.9 (.5)	18.2 (.4)	17.1 (.4)	15.0 (.4)	16 (.4)
Paid staff in group	2.0 (0)	2.4 (.1)	2.2 (.1)	2.2 (.1)	1.7 (.1)	1.7 (.1)
Staff-to-child ratio	1:9 (.1)	1:8.1 (.4)	1:8.5 (.3)	1:8.9 (.2)	1:9.7 (.3)	1:10.2 (.3)

*All values are weighted to represent the United States as a whole (overall column) or the specified program type. Values in parentheses represent standard errors.

Discussion

The purpose of this paper was to present information on early childhood programs for 3- and 4-year-olds and teachers of young children across the United States. Our data indicate that for-profit centers outnumber other types of centers, although there are many religiously affiliated programs, Head Start programs, public school programs, and other nonprofit programs. Most programs operate more than eight hours a day, and almost none operate during night hours. Structural features of early education programs vary with regard to program type. We found that the vast majority of teachers of 3- and 4-year-olds are White women. Teachers are diverse with regard to educational background, with about half holding a college degree.

Currently, we are lacking an ongoing, systematic method of collecting information on early childhood programs. Further, the information available varies with regard to sampling strategy, making direct comparisons and considerations of changes over time difficult. In the present study, we selected our sample through a random selection of center names from a list we acquired from a private marketing firm. In an earlier study, Kisker, Hofferth, Phillips, and Farquhar (1991) identified their sample of centers by first selecting a random sample of counties in the United States. These counties were stratified according to region, metropolitan status, and poverty level. Once counties were selected, they randomly selected child care providers within each of the counties and collected information on all staff within their center. Therefore, the information they collected on teachers will not reflect the sampling error that our data reflect.

The Cost, Quality, and Outcomes Study Team (1995) selected their centers by first selecting regions within four states from which to collect data. Within each of these states, the study team selected a stratified random sample of 100 programs with equal representation of for-profit and nonprofit centers. Once centers were identified, classrooms were randomly chosen within each center. Only programs that provided services 30 hours per week and 11 months per year were included; therefore, no public school or Head Start programs were included in their sample.

In the following section, we will draw comparisons between our data and the data collected by Kisker, Hofferth, Phillips, and Farquhar (1991) and the Cost, Quality, and Outcomes Study Team (1995). Despite the differences in sampling among those studies and the present study, all three of these studies are large-scale studies that provide a national picture of what is happening in early education programs. However, the differences in sampling strategies should be kept in mind when comparisons are made.

Data collected in the present study suggest that the number of early childhood programs in public schools has grown in the past 10 years. Although the sampling strategy for the Cost, Quality, and Outcomes Study Team (1995) does not allow for this type of calculation, Kisker, Hofferth, Phillips, and Farquhar (1991) reported that in 1990, 8% of centers were located in public schools. According to our estimates, this number has since doubled. This estimate is consistent with the findings of other researchers that indicate that public schools are playing an increasingly large role in the provision of care and education of children prior to kindergarten entry in the United States (Clifford, Early, & Hills, 1999; Mitchell, Ripple, & Chanana, 1998). Currently, over 40 state departments of education are funding programs for 3- and/or 4-year-olds (Schulman, Blank, & Ewen, 1999), and many of these programs are in public schools. Clifford and colleagues found that at least one in seven 4-year-olds was attending an early childhood program in a public school in 1995. Some states, such as Georgia and New York, are moving toward making pre-kindergarten available for all 4-year-olds in their state. Other states, such as Ohio and Minnesota, are using state dollars to expand Head Start programs in order to provide services to more children. Given the trend in the past few years, the number of young children in schools before kindergarten is likely to increase. Clearly, the role of public schools in providing programming prior to kindergarten merits further study.

Quality Practices

Although the Profile of Child Care Settings study (Kisker, Hofferth, Phillips, & Farquhar, 1991) was conducted 10 years ago, there are many similarities between those data and the data we collected in the present study. For example, with regard to education, teachers in public schools are still more educated than teachers in other settings, especially those in for-profit settings. Overall, as reported by Kisker, Hofferth, Phillips, and Farquhar (1991), 50% of teachers of 3- and 4-year-olds still do not hold a college degree. The Cost, Quality, and Outcomes Study Team (1995) reported that only 31% of teachers had a college degree. However, their sample mostly excluded public school teachers, the group found to have the highest education in our sample. If public school teachers were excluded from our sample, teacher educational attainment would look much more similar to the Cost, Quality, and Outcomes study findings. Given all the evidence that links higher teacher education to higher-quality services for children (e.g., Cost, Quality, and Outcomes Study Team, 1995; Whitebook, Howes, & Phillips, 1989), these data are somewhat discouraging. However, more recent research (Saluja, Early, & Clifford, 2000) suggests that many states are making efforts to reform their policies regarding teacher education requirements with the hope that they will soon have a more highly educated early childhood workforce.

Another somewhat discouraging finding is that the child care workforce is still predominantly White and is not well matched with the ethnic/racial diversity seen among children. In fact, the percentage of teachers from minority backgrounds has decreased

since 1990, according to these data. In 1991, Kisker, Hofferth, Phillips, and Farquhar reported that the racial and ethnic backgrounds of teachers in early education and care programs in 1990 were as follows: 74% White, 5% Hispanic, 18% Black, and 3% Other. We estimated that 78% of teachers in center-based care are White, whereas only 10% are Black, 6% are Latino, and 6% are of another race (or mixed race). Ideally, the early childhood workforce should reflect the cultural composition of those children enrolled in early childhood programs. Many believe that seeing teachers from a similar ethnic background validates children's identities. Further, seeing teachers from different backgrounds may help break down stereotypes (Chang, Muckelroy, & Pulido-Tobiassen, 1996). Efforts to recruit more ethnic minorities into the field of early childhood education need to be made.

Our data indicate that, on average, centers tend to have staff-to-child ratios comparable to NAEYC's recommendation, except for-profit centers. Given that this is probably a "best case" picture, the fact that for-profit centers report ratios of more than 1 to 10 seems problematic. Kisker, Hofferth, Phillips, and Farquhar (1991) also found that for-profit chain centers had less-favorable ratios than independent for-profit, religiously affiliated, and other nonprofit centers. This variation in ratios among different types of centers is probably due in part to variation in state child care licensing regulations. According to data compiled in 1998 (Mitchell, Ripple, & Chanana, 1998), 16 states allowed for ratios between 1 to 15 and 1 to 20. Until states adopt stricter regulations, centers will continue to maintain high ratios in order to maximize revenues.

The majority of early childhood programs operate during the day. Less than 1% of the programs operate at night, making it difficult for parents who work second or third shifts to find center-based care for their children. As more programs open in the schools, more programs will follow school hours, making it increasingly difficult for this population to find care for their children. These parents are forced to select other types of care. Careful consideration needs to be given to this issue so as to avoid overlooking this important part of our population.

Limitations of Study

Based on the average age of our sample, the education level, and the relatively low turnover rate, we suspect that our sample may not be wholly representative of the national early childhood workforce. We suspect that this conclusion is due to our sampling method and our lower-than-anticipated response rate. We believe that directors asked their more experienced teachers to complete the teacher section of the questionnaire. Therefore, the average age, educational attainment, and tenure of teachers reflected in this study are likely to be inflated. However, if most directors chose their best teacher, comparisons among different program types are probably accurate. Nonetheless, these data should be interpreted with caution.

Conclusion

As more and more parents of young children enter the workforce, they face the sometimes difficult task of choosing who will care for their children. As they make these decisions, it is important that they have access to information such as that described in this paper. Further, in order to make improvements to the early childhood education system, we need

to have access to information on the current status of the programs available to young children. More research is needed; ongoing tracking of early childhood programs and the workforce would aid policy makers as decisions are made about regulation and funding.

Acknowledgments

The work reported herein was supported under the Educational Research and Development Center Program, PR/Award Number R307A60004, as administered by the Office of Educational Research and Improvement, U.S. Department of Education. However, the contents do not necessarily represent the positions or policies of the National Institute on Early Childhood Development and Education, the Office of Educational Research and Improvement, or the U.S. Department of Education, and endorsement by the Federal government should not be assumed.

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